

64 16. **(Amended)** The process of claim 14, wherein the relatively low analysis organic waste material is selected from the group consisting of sewage sludge, poultry manure, food processing wastes, wastes from paper manufacturing, swine manure sludge, and mixtures thereof.

REMARKS

Introduction

Receipt is acknowledged of the Office Action dated January 24, 2002. In the Action the Examiner rejected claims 1-16 under alleged obviousness-type double patenting. The Examiner has also rejected claims 3-16 as allegedly indefinite. Finally, the Examiner rejected claims 1-13 as allegedly anticipated, or, in the alternative, allegedly obvious.

By the foregoing, Applicants have amended the specification to update information on related applications, namely, that the instant application is a continuation of U.S.S.N. 08/852,663, filed on May 7, 1997, now U.S. Patent 5,984,992. Applicants have also amended claims 3-5, 6, 9, and 12-16. No claims have been added or canceled. Consequently, claims 1-16 remain pending with entry of the instant amendments. The amendments find full support in the originally filed specification and claims. Reconsideration and withdrawal of any outstanding objections and rejections in view of the foregoing amendments and remarks set forth below are respectfully requested.

Remarks Regarding Obviousness-Type Double Patenting

Claims 1-16 stand rejected for alleged obviousness-type double patenting over claims 1-12 of U.S. Patent No. 5,984,992. Further, claims 1-16 stand rejected for alleged obviousness-type double patenting over claims 1-8 of U.S. Patent No. 6,159,263.

Without acquiescing in the legal correctness of the rejection, Applicants respectfully request that the Examiner reserve this rejection until allowable subject matter has been indicated.

Remarks Regarding 35 U.S.C. § 112, Second Paragraph

Claims 3-16 stand rejected, under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. Specifically, the Examiner asserts that "[i]n claims 4 and 13, it is indefinite as to what would constitute a "conventional granular fertilizer". In claims 3 and 12, it is indefinite as to what would constitute "standard granular fertilizer application equipment". In claims 5, it is indefinite as to what would constitute a "low pH". In claims 6 and 9, "low" is a relative term and therefore indefinite. In claims 14-16, it is indefinite as to whether the entire process is being claimed, or only the "improvement" thereof, since the claims literally recite an "improvement" in a process, however the conventional Jepson format calls for the admittedly known process to be positively recited in the preamble, with the "improvement" recited after the preamble." Applicants respectfully traverse the rejection.

Without acquiescing in the statements as set forth in the rejection, but solely to bring the case closer to allowance, Applicants have amended the claims in a manner overcoming the rejection. In particular, Applicants have amended claims 3 and 12 to specify that the granular fertilizer has a size and shape useable in a fertilizer spreader. Applicants have also amended claims 4 and 13 to specify that the granular fertilizer has a size, a shape, and a density which is useable as a fertilizer. Applicants have also amended claims 5, 6, and 9 to specify that the scrubber water is at a pH of 2-3. Applicants have also amended claims 14-16 to remove the term "improvement."

Applicants respectfully submit that the claims distinctly describe the instant invention. Accordingly, reconsideration and withdrawal of the rejection under § 112, second paragraph are respectfully requested.

Remarks Regarding 35 U.S.C. §§ 102(b) and 103(a)

Claims 1-13 stand rejected, under 35 U.S.C. § 102(b), as allegedly anticipated by, or, in the alternative, under 35 U.S.C. § 103(a), as allegedly obvious over U.S. Patent No. 3,050,383 to Wilson (Wilson). Further, claims 14-16 stand rejected, under 35 U.S.C. § 103(a), as allegedly obvious over Wilson in view of an article entitled "Pipe-cross Reactor Technical Update" (the Technical Update). Lastly, claims 14-16 stand rejected, under 35 U.S.C. § 103(a), as allegedly obvious over Wilson in view of U.S. Patent No. 4,619,684 to Salladay et al. (Salladay). Applicants respectfully traverse these rejections.

The invention is drawn to a granular fertilizer and a process of producing the same comprising treatment of relatively low analysis organic waste material in a particular pipe-cross reactor. Applicants respectfully submit that none of the applied reference, either taken alone, or in any combination, teach or suggest the claimed invention.

For example, Wilson simply fails to teach or suggest treatment of relatively low analysis organic waste material in a pipe-cross reactor to prepare a granular fertilizer. Therefore, Wilson fails to teach each element of the claimed invention, or alternatively, Wilson fails to motivate one of ordinary skill to modify its teachings to include a granular fertilizer and a process of producing the same comprising treatment of relatively low analysis organic waste material in a pipe-cross reactor.

Presumably, the Examiner combines Wilson with the Technical Update for the supposed proposition that this article teaches a pipe-cross reactor. See Office Action, page 5 (The PIPE-CROSS REACTOR TECHNICAL UPDATE ARTICLE discloses the advantages and disadvantages of a PCR in order to produce fertilizer.) However, the Technical Update still fails to remedy the deficiencies of Wilson since the Technical Update fails to teach or suggest treating the recited low analysis organic waste material in

order to prepare a granular fertilizer. Accordingly, there is no motivation to combine Wilson with the Technical Update, and furthermore, such a combination would still fail to teach or suggest the claimed invention.

In this connection, the PTO also recognized that there is no motivation to combine these references. See pages 2 and 3 of Notice of Allowance issued December 30, 1998 in parent Serial No. 08/852,663 (copy attached) ("Mr. Turner argued during the personal interview of September 16, 1998 that there would be no motivation from the Pipe-Cross Reactor (PCR) Technical Update Article to use PCR to treat the low analysis organic waste material of Wilson (U.S. Patent, 3,050,383) and pointed out that in the past, the PCR had only been used to treat substantially pure materials, such as the ammoniation of acids. This argument is borne out by said Article which discloses that, "this led to the development of the PCR wherein two acids are ammoniated simultaneously". The examiners agreed with Mr. Turner that it would not have been obvious from said Article to use a PCR to treat the low analysis organic waste of Wilson, since there would be no motivation to do so.. In this regard, the fact that two references can be combined does not necessarily mean that it would have been obvious to do so.").

Finally, Salladay also fails to remedy the deficiencies of Wilson in teaching the claimed invention since Salladay fails to teach or suggest treatment of relatively low analysis organic waste material in a pipe-cross reactor to prepare a granular fertilizer. Accordingly, there is no motivation to combine Wilson with Salladay, and furthermore, such a combination would still fail to teach or suggest the claimed invention.

Therefore, there is no motivation to combine the applied references, and none of the applied references teach or suggest the claim invention. Accordingly, reconsideration and withdrawal of the rejections under § 102(b) and/or § 103(a) are respectfully requested.

**MARKED UP COPY OF THE AMENDMENTS TO THE SPECIFICATION
AND THE CLAIMS**

In accordance with 37 C.F.R. § 1.121(b), submitted below is a marked version of the amendments to indicate the changes made to the specification and the claims.

In the Specification:

Cross-Reference to Related Applications: This application is a continuation of U.S.S.N. 08/852,663, filed on May 7, 1997, now U.S. Patent [] **5,984,992**.

In the Claims:

3. (Amended) The granular fertilizer of claim 1, wherein said granular fertilizer **has a size and shape useable in a fertilizer spreader** [is sized and shaped for application by standard granular fertilizer application equipment].

4. (Amended) The granular fertilizer of claim 1, wherein said granular fertilizer has [substantially the same] a size, a shape, and a density **which is useable as a fertilizer** [as a conventional granular fertilizer].

5. (Amended) A granular fertilizer of relatively low analysis organic waste material having an enhanced plant nutrient value composition, said fertilizer produced by the process comprising:

mixing said relatively low analysis organic waste material with water to form a slurry capable of being pumped;

pumping said slurry to a pipe-cross reactor for reaction with a base, acid, and water to form a melt;

spraying said melt onto a recycling bed of fines in a granulator, and flashing off water contained in the melt as steam;

rolling said melt onto fine particles in the granulator to form said granular fertilizer;

drying said granular fertilizer to reduce the moisture content thereof to form dried granular fertilizer comprising an enhanced plant nutrient value composition; and

collecting fumes from the granulator containing steam, ammonia and particulate by maintaining a negative pressure inside the granulator by pulling the fumes through a venturi scrubber having a venturi throat with [low pH] water with a pH of 2-3 as scrubber water sprayed into the venturi throat.

6. (Amended) The granular fertilizer of claim 5, wherein the pH of the scrubber water is kept at 2-3 [low] by incorporating spent acid from a hot dip galvanizing process into the scrubber water.

9. (Amended) The granular fertilizer of claim 6, wherein the pH of the scrubber water is kept at 2-3 [low] by incorporating spent acid from a hot dip galvanizing process into the scrubber water.

12. (Amended) The granular fertilizer of claim 5, wherein said granular fertilizer has a size and shape useable in a fertilizer spreader [is sized and shaped for application by standard granular fertilizer application equipment].

13. (Amended) The granular fertilizer of claim 5, wherein said granular fertilizer has [substantially the same] a size, a shape, and a density which is useable as a fertilizer [as a conventional granular fertilizer].

14. (Amended) [An improvement in a] A process of treating relatively low analysis organic waste material, [said process involving the] comprising treating

[treatment of] the relatively low analysis organic waste material with exothermically reacting acid and base to enhance the relatively low analysis organic waste material's plant nutrient value, [the improvement] further comprising conducting said treatment in a pipe-cross reactor.

15. (Amended) The process [improvement] of claim 14, wherein the pipe-cross reactor feeds into a granulator.

16. (Amended) The process [improvement] of claim 14, wherein the relatively low analysis organic waste material is selected from the group consisting of sewage sludge, poultry manure, food processing wastes, wastes from paper manu